

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A sludge harvester for removing a concentrated nutrient sludge from a sludge ponds pond comprising an aqueous dilute layer and a more concentrated sludge layer containing mammalian fecal matter, the sludge harvester comprising:

a frame;

one or more wheels or skids attached to said frame;

means for gently breaking up at least a portion of a sludge layer containing mammalian fecal matter adjacent to an aqueous dilute layer; ~~and~~

means for capturing at least a portion of a broken up sludge layer containing mammalian fecal matter; and

means for transporting captured sludge containing mammalian fecal matter to a location external to said frame.

2. (Original) A sludge harvester as recited in claim 1, wherein said frame includes a flat bed.

3. (Original) A sludge harvester as recited in claim 2, wherein said flat bed includes a plurality of sideboards designed so as to reduce at least one of vortexing, turbulence, and mixing.

4. (Currently Amended) A sludge harvester as recited in claim 1, wherein said means for gently breaking up at least a portion of a sludge layer comprises a pin mixer.

5. (Currently Amended) A sludge harvester as recited in claim 1, wherein said means for gently breaking up at least a portion of a sludge layer comprises an auger.

6. (Currently Amended) A sludge harvester as recited in claim 1, wherein said means for gently breaking up at least a portion of a sludge layer comprises a rake.

7. (Original) A sludge harvester as recited in claim 1, wherein said means for capturing at least a portion of a broken up sludge layer comprises a pump.

8. (Original) A sludge harvester as recited in claim 7, wherein said pump is designed so as to pump about 200 gallons per minute or less during use.

9. (Original) A sludge harvester as recited in claim 7, wherein said pump is designed so as to pump about 150 gallons per minute or less during use.

10. (Original) A sludge harvester as recited in claim 7, wherein said pump is designed so as to pump about 100 gallons per minute or less during use.

11. (Original) A sludge harvester as recited in claim 1, wherein the sludge harvester is designed so as to be self-propelled.

12. (Original) A sludge harvester as recited in claim 1, further comprising at least one of a tow rope, a chain, or a cable for pulling the sludge harvester through a sludge pond during use.

13. (Currently Amended) A sludge harvester for removing a concentrated nutrient sludge from a sludge ponds pond, comprising:

a frame;

one or more wheels or skids attached to said frame;

at least one of a pin mixer, auger or rake designed and positioned so as to break up at least a portion of a sludge layer adjacent to a dilute layer when the sludge harvester is in use; and

at least one suctioning pump designed and positioned so as to capture at least a portion of a broken up sludge layer.

14. (Original) A sludge harvester as recited in claim 13, wherein said pump is designed so as to pump a volume in a range of about 50 to about 150 gallons per minute during use.

15. (Original) A sludge harvester as recited in claim 13, wherein said frame includes a flat bed and a plurality of sideboards designed so as to reduce at least one of vortexing, turbulence, and mixing.

16. (Currently Amended) A method of ~~removing~~ processing a concentrated nutrient sludge from a sludge pond, comprising:

providing a sludge harvester as recited in claim 13;

introducing said sludge harvester into a sludge pond having a dilute layer and a sludge layer; and

operating said sludge harvester so as to recover an organic sludge product comprising a portion of the sludge layer.

17. (Original) A method as recited in claim 16, wherein said recovered organic sludge product has a high concentration of soluble nutrients.

18. (Original) A method as recited in claim 16, wherein operation of said harvester is at least partially automated.

19. (Original) A method as recited in claim 16, further comprising removing water from said organic sludge product to yield a wet or dry organic fertilizer product.

20. (Original) A method as recited in claim 16, further comprising applying said organic sludge product onto agricultural land.

21. (New) A sludge harvester for removing a concentrated nutrient sludge from a sludge pond, comprising:

a frame;

one or more wheels or skids attached to said frame;

means for breaking up at least a portion of a sludge layer adjacent to a dilute layer; and

a pump attached to said frame for capturing at least a portion of a broken up sludge layer, said pump designed to pump about 200 gallons per minute or less during use.

22. (New) A sludge harvester for removing a concentrated nutrient sludge from a sludge pond, comprising:

a frame;

one or more wheels or skids attached to said frame;

at least one of a pin mixer, auger or rake designed and positioned so as to break up at least a portion of a sludge layer adjacent to a dilute layer when the sludge harvester is in use; and

at least one pump designed so as to pump a volume of about 200 gallons per minute or less during use and positioned so as to capture at least a portion of a broken up sludge layer.